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## Inside this issue:

2019 Annual Meeting Announcement	2
Future Annual Meeting Locations	3
2019 NAPB Borlaug Scholars Program	4-5
Seed Science Foundation Formed	6
2019 "Better Seed, Better Life" Video Contest Winner	7
Graduate Student Spotlight	8
Plant Breeding Profile: AU-NPL-17	9
Announcements	10
Connect With Us!	11



## *Join us in Georgia for the 2019 Annual Meeting*

The National Association of Plant Breeders Annual Meeting is heading south, as the University of Georgia's Institute for Plant Breeding, Genetics and Genomics extends a little southern hospitality as our 2019 Annual Meeting host! Georgia has a rich agricultural history, diverse landscape and broad array of crops, all juxtaposed with metropolitan Atlanta and its connection to global commerce. Agriculture, Georgia's largest industry, is underpinned by several plant breeding programs at the University of Georgia and it only seems appropriate to host our annual meeting in a state so appreciative of public plant breeding!

The 2019 Annual Meeting will be held from August 25th through the 29th at the Callaway Gardens Conference Center in Pine Mountain, Georgia. Within an hour of Atlanta, Callaway Gardens offers beautiful hiking and golfing, with easy access to the Little White House of Franklin Delano Roosevelt and to the birthplace and home of Jimmy Carter. Program highlights include an opening plenary featuring UGA geneticist Jeff Bennetzen, sessions on contemporary breeding and genomics research for horticultural and agronomic crops important in the southeast, tours to the Griffin and Tifton campuses of the University of Georgia and the NIFA-AFRI plant breeding project meeting.

Meeting registration, program, and travel information can be found at [the meeting website](#).  
We hope you will make plans to join us in Georgia!



**UNIVERSITY OF  
GEORGIA**

## *Future Meeting Hosts Announced*

**We are excited to announce the host institutions for our 2020-2022 Annual Meetings!**

**2020 - University of Nebraska-Lincoln**

**2021 - Cornell University**

**2022 - Iowa State University**

## *2019 NAPB Borlaug Scholars Program*

### **Announcement:**

The National Association of Plant Breeders strengthens plant breeding to promote food security, quality of life, and a sustainable future.



Within the mission of NAPB, the Borlaug Scholars Committee has this supporting mission:

*Selection of outstanding plant breeding students through national competition; funding of these students to attend the NAPB Annual Meetings; mentoring of scholarship recipients by accomplished members during and after the annual meeting.*

### **Frequently Asked Questions:**

**Q1: When and where are the 2019 NAPB Annual Meetings?**

**A1:** August 25-29, 2019, Pine Mountain, GA, hosted by the *University of Georgia*

**Q2: Who should apply for NAPB Borlaug Scholarships?**

**A2:** Upper level undergraduates heading toward graduate school, and advanced level graduate students seeking career growth opportunities; who strongly desire to and can, if selected, attend the 2019 NAPB Annual Meetings; and who have a demonstrated research and career interest in pursuing Plant Breeding, in the broadest sense, as a professional career.

**Q3: When can we apply?**

**A3:** The self-nomination window is open from **Jan. 3 - Mar. 21, 2019.**

**Q4: Where do I apply for an NAPB Borlaug Scholarship beginning Jan. 3rd?**

**A4:** Apply here for upper level [Undergraduates](#)

Apply here for advanced level [Graduate Students](#)

**Q5: What does a Borlaug Scholarship include?**

**A5:** Borlaug Scholars will receive travel funds, free meeting registration, student membership in NAPB, if not previously a member, recognition in appropriate media and in person during the conference, networking opportunities, scientific learning, soft skills training opportunities, and a personal professional mentor during and following the annual meetings to help enrich the total experience. There is opportunity to present personal research as a poster.

## *2019 NAPB Borlaug Scholars Program*

### Frequently Asked Questions:

**Q6:** I just learned about NAPB. **How can I join NAPB?**

**A6:** Our website is [www.plantbreeding.org](http://www.plantbreeding.org). Or, simply [click here!](#)

**Q7:** This is a great new program helping students and the plant breeding scientific community! **How can I get involved?**

**A7:** As a member of NAPB, you should encourage experienced and worthy students to apply for Borlaug Scholarships. Seasoned professional members should consider volunteering as mentors by entering their profile in our mentor data base: [mentors click here](#). Or, seasoned mentors are welcome to volunteer to participate in the selection and program planning committee.

**Q8:** Scholarships require significant funding. **How can I donate to the NAPB Borlaug Scholars ASF Fund?**

**A8:** Bless you for getting this far! You may donate online using your credit card: [Donate here!](#)

**Q9:** I represent an institution willing to contribute to the NAPB Borlaug Scholars Fund. **Who should I contact to donate?**

**A9:** You may contact **Donn Cummings**, NAPB Borlaug Scholars, Chair at 765-438-0359 or by email at [donncummings1@gmail.com](mailto:donncummings1@gmail.com) to discuss your plans and arrange your contribution. Your institution will be appropriately recognized for their participation.

Check out **Seed World [podcasts](#)** of our **2018 NAPB Borlaug Scholars** and Mentors from the 2018 Annual Meetings in Guelph, ONT.

[Liz Prenger](#) [Tavin Schneider](#)

[Katelyn Fritz](#)[Adam Bolton](#)

[Andrew Herr](#)

[Austin Dobbels](#)

[Kevin Falk](#)

[Dorothy Kirsch](#)

Mentors: [Roy Cantrell](#) [Arron Carter](#)

Check out **Kevin Falk** on the cover of **Germination Magazine** in Nov 2018 Issue: [Kevin Falk Nov 2018 Germination Cover](#)

## *Formation of the Seed Science Foundation*

*By Dave Bubeck, Secretary, NAPB Executive Committee*

The American Seed Trade Association (ASTA) supported two long standing organizations which have recently merged. The boards of directors for the National Council of Commercial Plant Breeders (NCCPB) and the American Seed Research Foundation (ASRF) have been reviewing for a couple of years the opportunity to join efforts into what is now call the Seed Science Foundation. At a recent meeting in early December the two boards of directors and interim board members met to finalize the formation of the Seed Science Foundation (SSF) and finalize the charter board members.

The Seed Science Foundation mission will be to address seed and plant science challenges that are of keen interest to all ASTA members. Further, the SSF will encourage plant breeding education and seed research, in consideration of the ever-changing needs of the global seed industry. The SSF will continue efforts to fund public research programs in basic seed science and to explore opportunities for public and private research organizations to further our global knowledge of improving crop performance through seed genetics.

Both of the previous organizations established in the 1950's, ASRF and NCCPB, have well served the needs of a growing seed industry. Historically, the ASRF has been effective at influencing the needs for basic research in seed biology with the potential application to multiple crop species, enabling the application of the science to improve seed products for the benefit of farmers and consumers around the world. The NCCPB encouraged cooperation, partnering and educational support of private and public plant breeding.

As opportunities in numerous plant science disciplines have emerged, the necessity to grow ASTA and SSF influence on the sciences that contribute to further improve crop performance is clearly an essential component of a growing and successful seed industry. Therefore, the new SSF will serve as a fundamental resource for ASTA in delivering on its strategic objectives. To solidify this contribution, the SSF has formed a new board that will include officers as well as a research chair and six different subject matter chairs, a communications and a funding chair. The Subject matter chairs will represent the following six areas: breeding systems, seed health and pathology, digital agriculture, seed quality and testing, seed production technology and equipment, and seed-applied technologies. The chairs will be responsible for developing, reviewing and managing projects specific to their area of expertise, and engage with a broader group of science experts to draw upon for seed industry opportunities.

NAPB members should consider opportunities to connect and partner with the new SSF board.

**[Check out the \*Seed World\* article for more information!](#)**

## ***Former Borlaug Scholar Kevin Falk Wins 2018 “Better Seed, Better Life” Video Contest***

*By Zachary Jones, Secretary, NAPB Communication Committee*

Kevin Falk, 2018 Borlaug Scholar and Iowa State University Ph.D. student, was named the winner of the second annual “Better Seed, Better Life” video contest at the American Seed Trade Association's CSS 2018 & Seed Expo in December. This year’s contest theme was “Rumor Has It” and students were asked to create a video to help set the record straight on common myths or misconceptions about plant science and/or the seed industry. Kevin’s video tackled important misconceptions about seed saving, “patenting life”, and the farmer-seed company relationship by taking a walk around Iowa State’s campus to gather opinions about these controversial issues. The video then featured several Iowa State graduate students discussing the facts behind these myths, and how plant breeders play key roles in these systems.

Second and third place winners were Kshitij Khatri of the University of Florida and Nathalia Penna Cruzato of Texas A&M University.

The “Better Seed, Better Life” Video Contest is co-sponsored by the American Seed Trade Association, the American Society of Agronomy, Crop Science Society of America and Soil Science Society of America (Tri-Societies), and the National Association of Plant Breeders. Each entry is judged by a panel of volunteers from AS-TA, NAPB, and the Tri-Societies. Winning students receive a cash prize.

[Watch Kevin’s Video](#)

[Watch Kshitij’s Video](#)

[Watch Nathalia’s Video](#)



# Graduate Student Spotlight

## Elizabeth Prenger



Elizabeth Prenger is a graduate student at the University of Georgia working in Soybean breeding. Elizabeth was our 2nd place student poster award winner at the 2018 annual meeting in Guelph.

*Where do you come from and what is your background?*

I come from a small town in Mid-Missouri called Saint Thomas. I grew up on part of my grandparents' farm (hogs, cattle, row crops, and hay) and eventually attended the University of Missouri, where I received a B.S. in Plant Sciences. While there, I worked for Dr. Melissa Mitchum researching soybean cyst nematode and for Dr. Andrew Scaboo's soybean breeding program. I also completed two internships with Monsanto and Seminis, working with corn and tomatoes, before moving to Athens, GA for graduate school.

*What institution do you attend and who is your advisor?*

I attend the University of Georgia in Athens, GA and am working toward a Master's in Plant Breeding, Genetics, and Genomics. I work in the soybean breeding and genetics program under the direction of Dr. Zenglu Li.

*What is the focus of your research?*

My research focuses on the genetics and improvement of soybean seed composition, especially protein, oil, and sucrose contents, which are important for the utility of soybeans for use in food, feed, and fuel. I study the genomics and agronomic performance of fast neutron seed composition mutants, and I have also characterized a near-isogenic line containing an introgression from a Korean tofu cultivar resulting in increased seed protein content.

*What is your favorite part of your job?*

I appreciate the practical applications of my research and thinking about how my findings can someday benefit farmers and contribute to a plentiful food supply.

*What would you like to do after graduate school?*

I plan to work as a research associate or professional with a focus on plant breeding. I am interested in a wide variety of crops of worldwide and local importance, and I am interested in working in a capacity to address international food security. I would also like to someday be able to produce food for myself and others through large-scale gardening and/or running a small farm.

*What will be our biggest challenge in the future of plant breeding?*

The biggest challenge to the future of plant breeding, in my opinion, will be mitigating the effects of climate change on crop production and the successful allocation and conservation of earth's limited resources while meeting the production needs demanded by the world's consumers.



# Plant Breeding Profile

## AU-NPL-17



Dr. Charles Chen is a professor in Auburn University's Department of Crop, Soil, and Environmental Sciences focusing on Peanut Breeding, Genetics, and Genomics. Dr. Chen recently released AU-NPL-17, Auburn's first runner peanut variety.

*By Jenny Koebernick & Zachary Jones, NAPB Communication Committee*

You might say Dr. Charles Chen of Auburn University's Department of Crop, Soil, and Environmental Sciences is working for peanuts, but it seems to really be paying off! The professor of peanut breeding and genetics recently released AU-NPL-17, a new runner peanut variety for the southeast and Auburn's first.

Runner peanuts are a major crop in the Southeast, with over 175,000 acres of runners planted in Alabama alone. Runner types are most commonly grown for processing into products like peanut butter and account for over eighty percent of the peanut acreage in the United States.

With the release of AU-NPL-17, the county's youngest peanut breeding program is officially on the map and headed to the farm, with the first quantities of seed becoming available to farmers in 2019. Founded in 2012 when Dr. Chen joined Auburn's College of Agriculture after service in the USDA Agriculture Research Service as a research geneticist, the breeding program is jointly run by Auburn University and the USDA's National Peanut Research Lab, located in Dawson, GA.

Despite being the program's first release, AU-NPL-17 is already turning heads, with strong performances in both national and state performance tests, out-yielding long-time standard varieties. AU-NPL-17 averaged 6,240 lbs/acre on 100 acres seed production field in 2018 in Alabama. In addition to yield, this new variety delivers resistances to tomato spotted wilt virus, early and late leaf spots, and white mold, three major, economically important pathogens in peanut production. Along with a strong agronomic and disease package, AU-NPL-17 is a "healthy peanut" with high levels of oleic acid, a monosaturated fatty acid known to reduce the amount of "bad" cholesterol while increasing levels of "good" cholesterol.

As AU-NPL-17 heads out of research and on to farms, Dr. Chen is already working on the next great advance in peanut breeding and variety development.

Besides breeding effort, Dr. Chen's lab conducts peanut genomic research of identifying QTLs/genes underlying desirable traits such as disease resistance, flavor attribute, drought tolerance, and oil chemistry through GWAS and RNA-seq technology. Dr. Chen also extensively explored peanut germplasm collections and identified new genetic resource for disease resistances and new mutates for oleic fatty acid.

## *Announcements*

- Food and Agriculture Mentors Wanted! Future Leaders for Food and Agriculture (FFAR)'s Fellows program seeks mentors for the upcoming cohort. The consensus among employers is that US universities could better prepare a career-ready STEM workforce by breaking down disciplinary silos and increasing the focus on professional development and "soft skills". The FFAR Fellows program guides three cohorts of 16-20 graduate students through a 3-year program of professional development and industry mentorship. For more information, check out their website at [FFARFellows.org](http://FFARFellows.org)
- University of Florida's Plant Science Council is gearing up for the 3<sup>rd</sup> Annual Plant Science Symposium, themed "Plant Improvement for End-Use Quality" that will take place on January 22-23, 2019 at UF in Gainesville, FL. The symposium will comprise lectures given by five speakers from across the country including Drs. John R. Clark (University of Arkansas), Maria Monteros (Noble Research Institute), Kevin Kenworthy (University of Florida), Laura Grapes (Bayer) and a representative from Corteva. Please, visit the symposium webpage at [www.ufplants.org/symposium](http://www.ufplants.org/symposium)
- Seed Production Course at UC Davis. The objective of this 3.5 day course (February 11-14, 2019) is to enhance participants' knowledge of the underlying biology of seed production and the key roles of bees and other insect pollinators, how to manage seed crops from agronomic, quality control, and genetic integrity standpoints, and how to meet new challenges through seed production research. Designed and delivered by leading industry and academic experts in seed production, the course format includes both plenary sessions and separate concurrent vegetable and agronomic crop sessions in order to focus more closely on topics that are specific to these crop groups. For more information and registration visit [http://sbc.ucdavis.edu/Courses/Seed\\_Production/](http://sbc.ucdavis.edu/Courses/Seed_Production/) or contact Julie Tillman at [jtillman@ucdavis.edu](mailto:jtillman@ucdavis.edu).
- The Nebraska Plant Science Symposium will be held Tuesday March 12, 2019 at the Nebraska Innovation Campus Conference Center. The 2019 meeting theme is "Training 21st Century Plant Breeders in the "Omics" Era". For more information and registration information, please visit the event website: <https://agronomy.unl.edu/plant-breeding-symposium>

Connect with us!

Website: [www.plantbreeding.org](http://www.plantbreeding.org)

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**Have an idea for a future newsletter?**

Email the communication committee:

**Chair:** Virginia Sykes — [vsykes@utk.edu](mailto:vsykes@utk.edu)

**Vice Chair:** Jodi Scheffler — [Jodi.scheffler@ars.usda.gov](mailto:Jodi.scheffler@ars.usda.gov)

**Secretary:** Zach Jones — [zachary.jones@pioneer.com](mailto:zachary.jones@pioneer.com)

**Graduate Student Liaison:** Ammani Naidu—  
[ammani\\_tamu\\_13@email.tamu.edu](mailto:ammani_tamu_13@email.tamu.edu)

**NAPB**

**NAPB: *Improving Plants to Improve Lives***

**Our Mission:** The National Association of Plant Breeders strengthens plant breeding to promote food security, quality of life, and a sustainable future.

**Our Vision:** The NAPB works to help create a future in which 1) Strong public and private sectors work independently and together to deliver varieties and improved germplasm to society, 2) The value and importance of plant breeding to food security, quality of life, and a sustainable future are known and appreciated by the public, and 3) Plant breeding is viewed as dynamic, problem solving, and creative. The NAPB intends to become a recognized and valued advocate for plant breeding research and education, helping to guide and implement a cohesive national plant breeding agenda.

*Join NAPB today!*

